

Specifications

Video Performance*

| | |
|---------------------------------------|-----------------------|
| Video Input Impedance | 75 ohm (balanced) |
| Video Input Voltage | 1 V p (+1/-3 dB) |
| Video Connector | BNC |
| Frequency Response | 10 Hz to 7 MHz (3 dB) |
| Signal to Noise Ratio | 62 dB as per RS250C |
| Differential Gain (-20 °C to +70 °C) | <4% |
| Differential Gain (-30 °C to +85 °C) | <7% |
| Differential Phase (-20 °C to +70 °C) | <4° |
| Differential Phase (-30 °C to +85 °C) | <7° |
| Field Tilt | <2% |
| Luminance | |
| Non-Linearity (-20 °C to +70 °C) | <4% |
| Luminance | |
| Non-Linearity (-30 °C to +85 °C) | <7% |

* measured with 144S or 244S unit as per RS-250C @ 1km fiber cable

Optical Performance

| | |
|-----------------------------|--------------------|
| Single mode - Core Diameter | 8 - 10u |
| Optical Connector | ST |
| Transmitting Light Source | Laser 1310 nm |
| Optical Power Output | -8 dBm (+/- 1 dBm) |
| Receiving Wavelength | 1550 nm |
| Receiver Sensitivity | - 36 dBm |

Data Interface

| | |
|-----------------------|--|
| Data Interface | RS-422 Bi-directional – 4 wire |
| Data Rate | Up to 200Kb/s |
| Operating Temperature | -30 °C to +85 °C |
| Dimensions | 6.75”(172mm) x 4.95”(126mm) x 1.4”(36mm) |
| Power Requirements | 12V AC or DC @ 300mA; 24VAC @ 200mA |

144S-VT/DX-M1ST

Fiber Optic Video Transmitter & 2Ch. RS-422 Data Transceiver

Singlemode

Single Fiber Operation

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Introduction :

The Elcommtech 144S-VT/DX-M1 forms part of a singlemode, single fiber video and data fiber optic transmission system. Using frequency modulation and operating as a dual window 1310/1550nm single fiber unit, the 144S-VT/DX-M1 provides the following facilities in a 170mm x 126mm x 34mm free standing module.

Optical Transmitter for : Composite Video signal &
2x RS-422 Data Channels

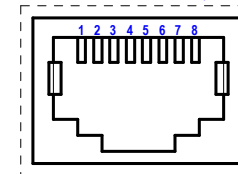
Optical Receiver for : 2x RS-422 Data Channels

Indicators :- All indicators are located on the top of the module.

| Indicator | | |
|-------------|-------|--|
| Power | off | The unit is not powered |
| | green | Power connected |
| Video Input | off | No video input or insufficient video signal present |
| | green | Composite Video signal present |
| Data Link | off | No received optical signal present |
| | green | Optical signal received |
| Data Tx1 | off | No data signal present at the optical transmitter Ch.1 input |
| | red | Data signal is present at the optical transmitter Ch.1 input |
| Data Rx1 | off | No data signal present at the optical receiver Ch.1 output |
| | green | Data signal is present at the optical receiver Ch.1 output |
| Data Tx2 | off | No data signal present at the optical transmitter Ch.2 input |
| | red | Data signal is present to the optical transmitter Ch.2 input |
| Data Rx2 | off | No data signal present at the optical receiver Ch.2 output |
| | green | Data signal is available at the optical receiver Ch.2 output |

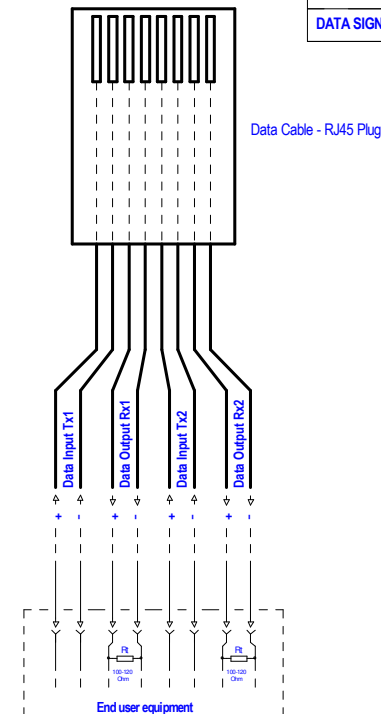
Data Connector Pinouts

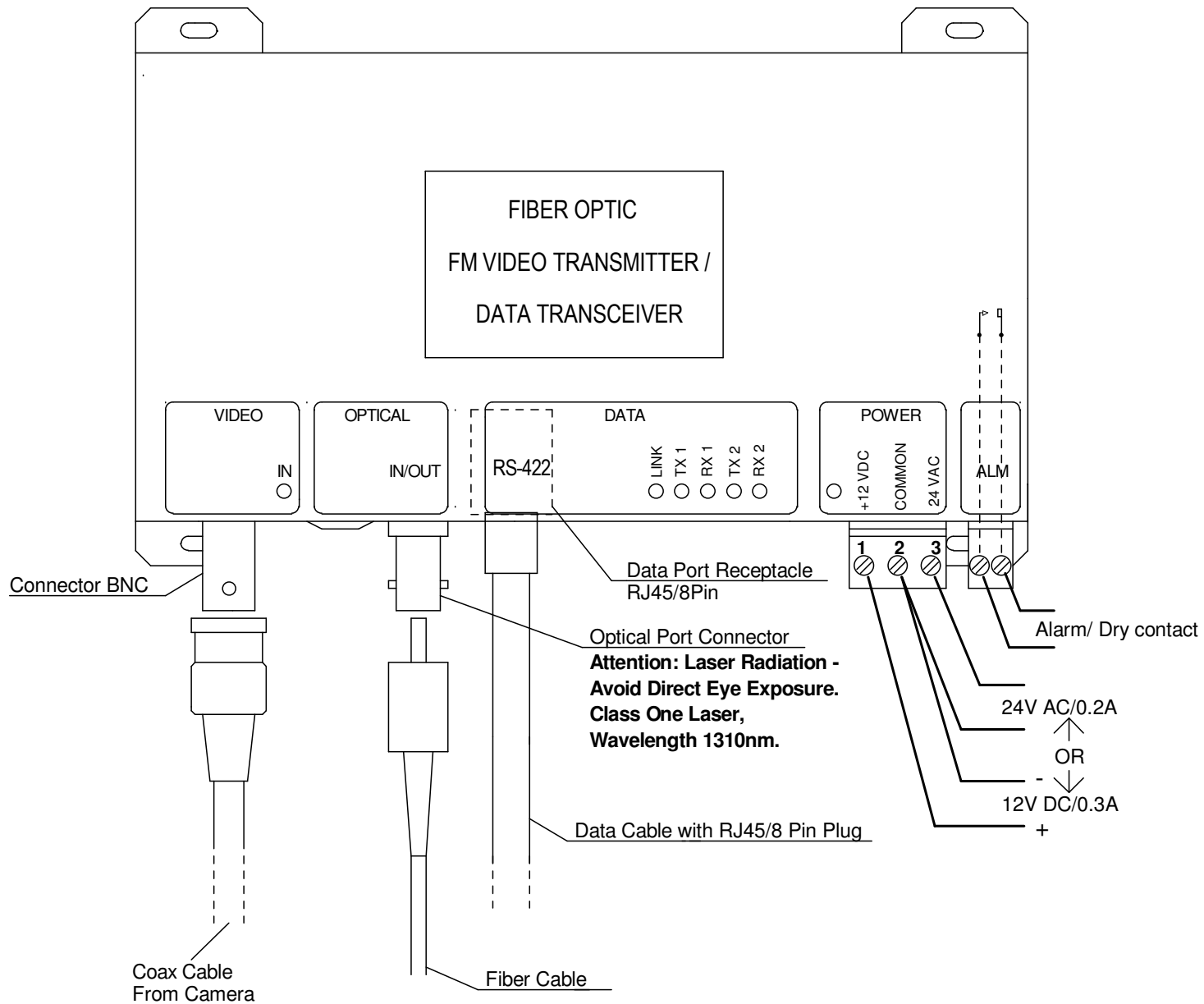
Data Port - RJ45 Modular Receptacle



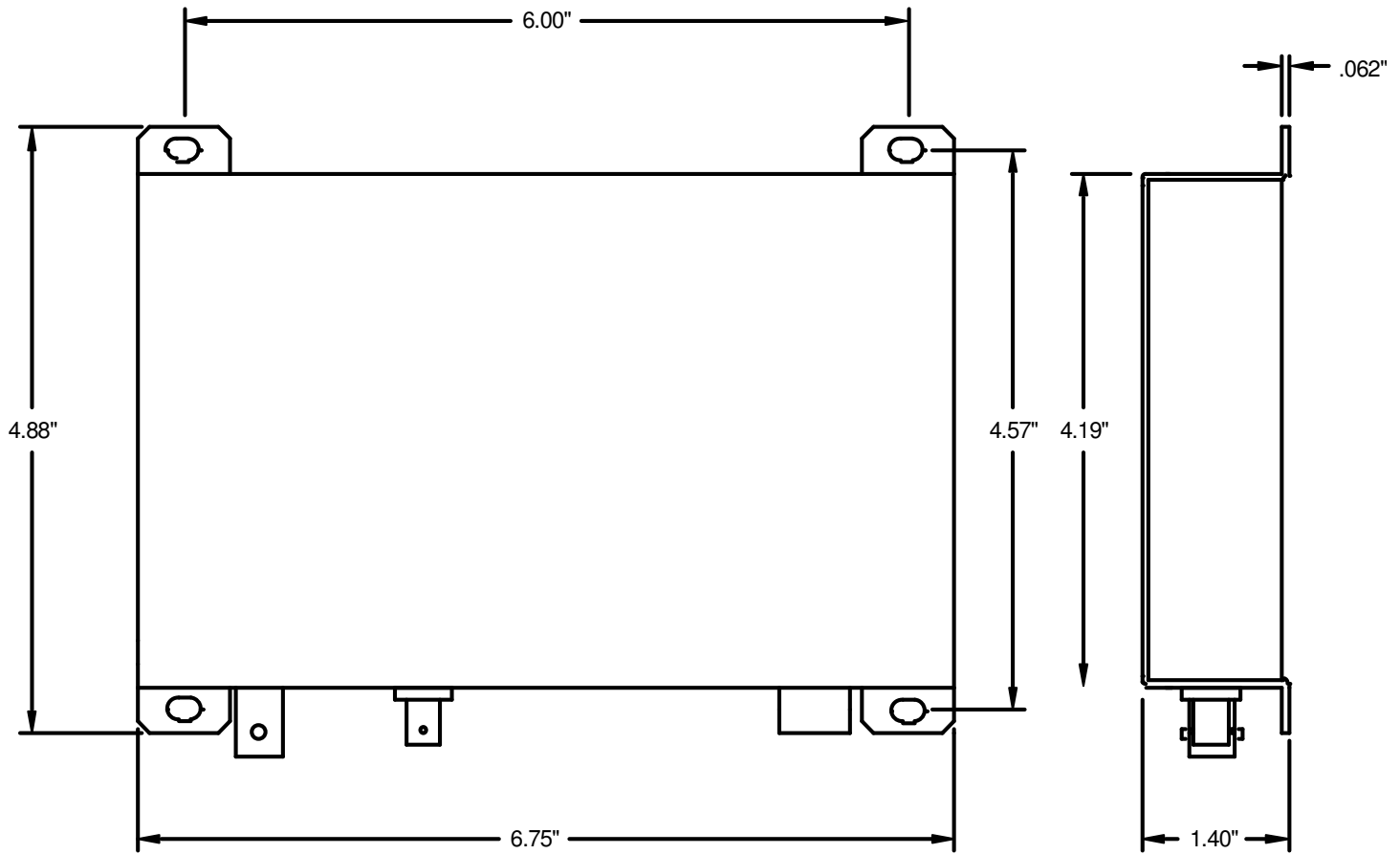
RS-422 Data Port Connector

| RS-422 | Tx1 (IN1) | Rx1 (OUT1) | Tx2 (IN2) | Rx2 (OUT2) |
|---------------|-----------|------------|-----------|------------|
| DATA SIGNAL + | 1 | 3 | 5 | 7 |
| DATA SIGNAL - | 2 | 4 | 6 | 8 |

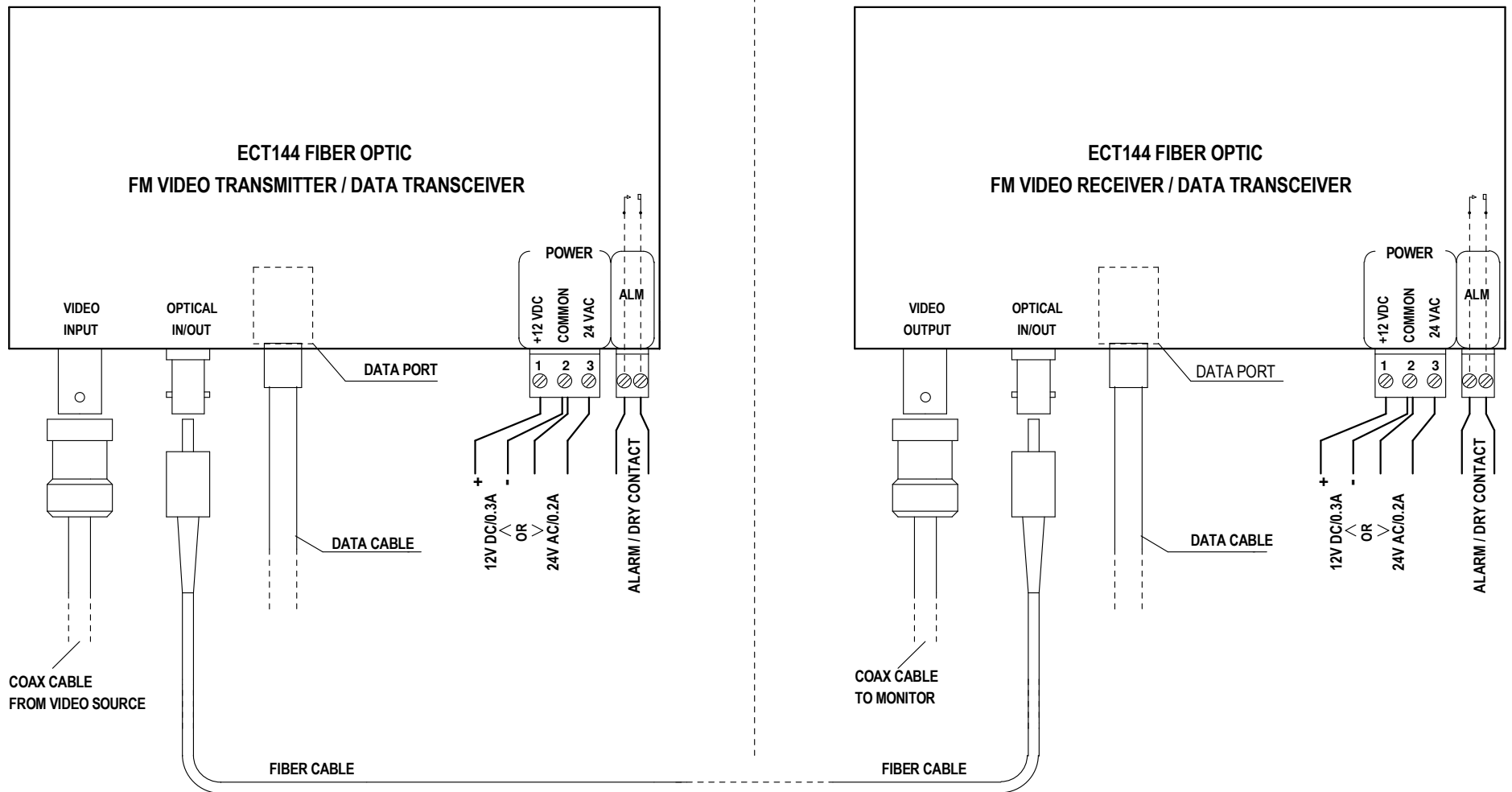




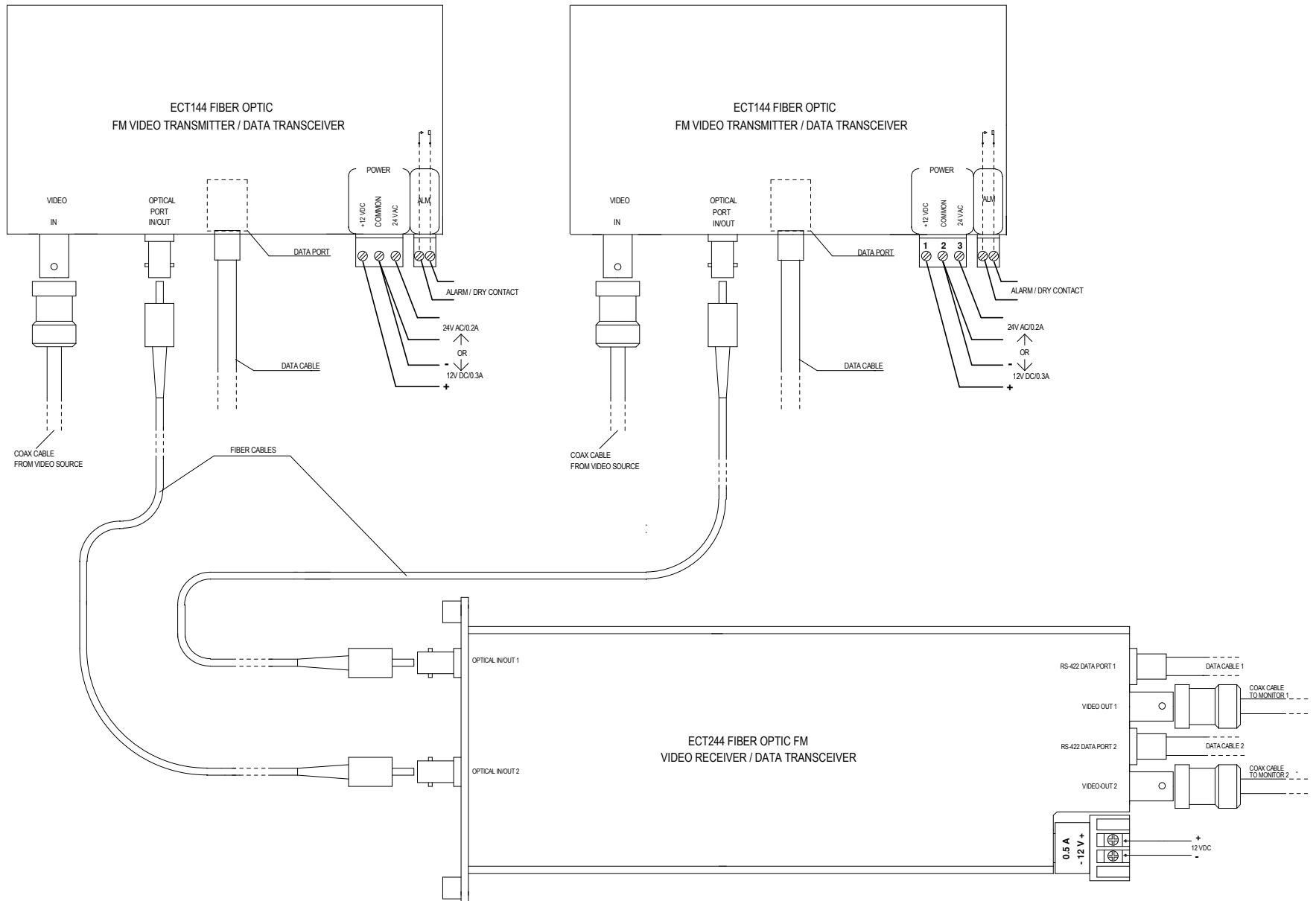
144S-VT/DX-M1 Video Transmitter / Data Transceiver Connections



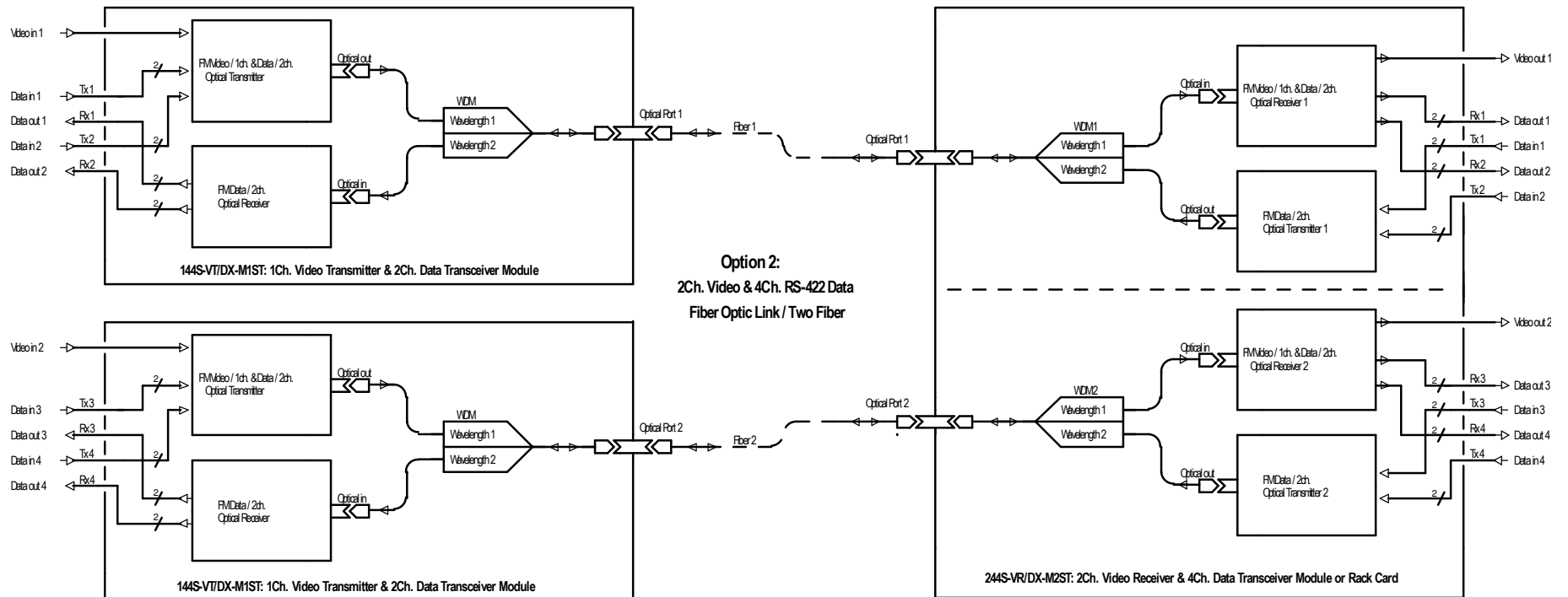
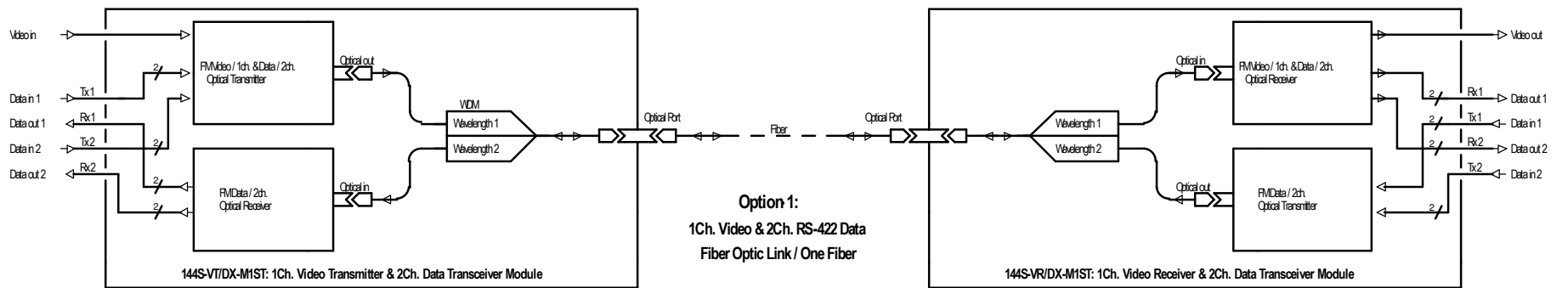
Installation Drawing



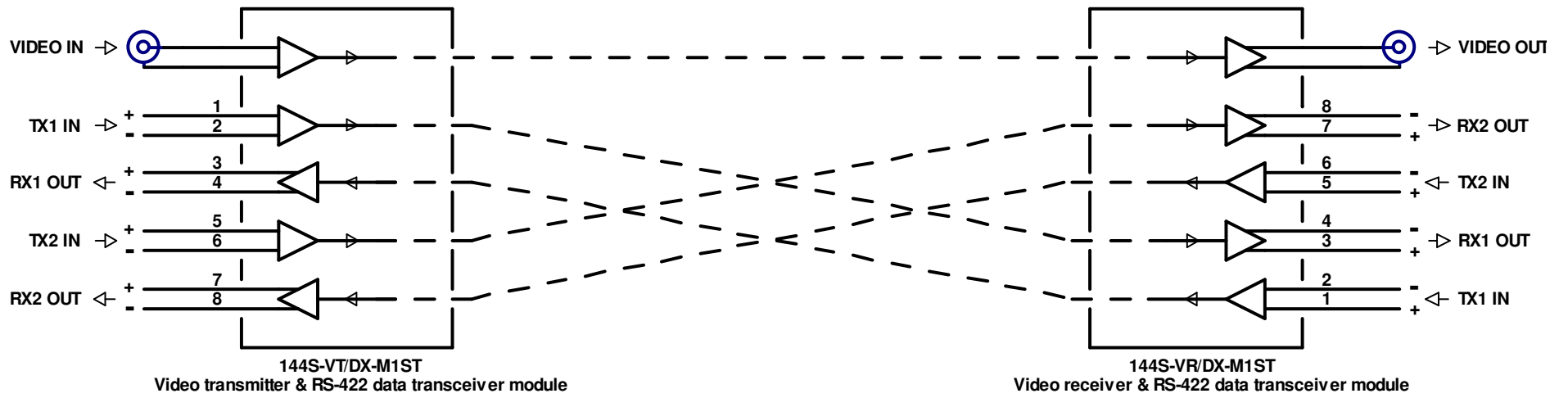
ECT144 Video & Data Link
 Connection Diagram



**ECT144/244 Video & Data Link
Connection Diagram**



**Video & RS-422 Data Fiber Optic Link Configurations
Block Diagram**



**ECT144 Fiber Optic FM Video & RS-422 Data Optical Link
Communication Logical Diagram**